

1 1. In a system with a plurality of packetized data streams, a method of designating a source of at
2 least one packetized data stream within a multiplexed signal including at least a portion of the at least
3 one packetized data stream, the method comprising the steps of:

4 assigning a unique designator to the source of the at least one packetized data stream;
5 multiplexing at least the portion of the at least one packetized data stream with at least a
6 portion of a second packetized data stream to create the multiplexed signal; and
7 transmitting the unique designator in conjunction with the multiplexed signal, wherein
8 transmission of the unique designator indicates the source of the portion of the multiplexed signal as
9 the source of the at least one packetized data stream.

1 2. The method of claim 1, wherein the packetized data stream is in a format compliant with one
2 of Moving Picture Experts Group type 2 (MPEG-2) standard, Moving Picture Experts Group type 4
3 (MPEG-4) standard, Asynchronous Transfer Modulation (ATM) standard, and Internet Protocol (IP)
4 standard.

1 3. The method of claim 1, wherein the step of transmitting the unique designator comprises the
2 steps of:

3 creating a unique designator signal that includes the unique designator; and
4 transmitting the unique designator signal in conjunction with the multiplexed signal, wherein
5 the unique designator signal provides the unique designator at the start of the at least one packet of the
6 at least one packetized data stream.

1 4. The method of claim 1, wherein the step of transmitting the unique designator comprises the
2 steps of:

3 creating a unique designator signal that includes the unique designator; and
4 transmitting the unique designator signal in conjunction with the multiplexed signal, wherein
5 the unique designator signal provides the unique designator at the start of the at least one byte of the at
6 least one packetized data stream.

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1 5. In a system with a plurality of packetized data streams, a method of designating to an external
2 conditional access module a source of at least one packetized data stream within a multiplexed signal
3 including at least a portion of the at least one packetized data stream, the method comprising the steps
4 of:

5 assigning a unique designator to the source of the at least one packetized data stream;
6 multiplexing at least the portion of the at least one packetized data stream with at least a
7 portion of a second packetized data stream to create the multiplexed signal; and
8 transmitting the unique designator in conjunction with the multiplexed signal to the external
9 conditional access module, wherein transmission of the unique designator indicates the source of the
10 portion of the multiplexed signal as the source of the at least one packetized data stream.

1 6. The method of claim 5, wherein the packetized data stream is in a format compliant with one
2 of Moving Picture Experts Group type 2 (MPEG-2) standard, Moving Picture Experts Group type 4
3 (MPEG-4) standard, Asynchronous Transfer Modulation (ATM) standard, and Internet Protocol (IP)
4 standard.

1 7. The method of claim 5, wherein the step of transmitting the unique designator comprises the
2 steps of:

3 creating a unique designator signal that includes the unique designator; and
4 transmitting the unique designator signal in conjunction with the multiplexed signal to the
5 external conditional access module, wherein the unique designator signal provides the unique
6 designator at the start of the at least one packet of the at least one packetized data stream.

1 8. The method of claim 5, wherein the external conditional access module decrypts the at least
2 one packet of the at least one packetized data stream based on the source of the at least one packetized
3 data stream indicated by the unique designator.

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1 9. In a host terminal, a method of multiplexing together packets from at least two packetized
2 data streams to enable decryption of the packets by an external conditional access module, the method
3 comprising the steps of:

4 assigning a unique designator to each originating packetized data stream of the at least two
5 packetized data streams;

6 multiplexing the packets forming portions of the at least two packetized data streams into a
7 signal;

8 creating an association for each packet in the signal with the unique designator of the
9 originating packetized data stream from which each packet originated;

10 transmitting the signal and the associations of the packets to the external conditional access
11 module; and

12 decrypting, in the external conditional access module, the packets in the signal based on the
13 originating packetized data stream as indicated by the associated unique designator.

1 10. The method of claim 9, wherein the at least two packetized data streams are in a format
2 compliant with one of Moving Picture Experts Group type 2 (MPEG-2) standard, Moving Picture
3 Experts Group type 4 (MPEG-4) standard, Asynchronous Transfer Modulation (ATM) standard, and
4 Internet Protocol (IP) standard.

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1 11. In a system with a plurality of Moving Picture Experts Group type 2 (MPEG-2) standard
2 transport streams and a host terminal, a method of designating to an external conditional access
3 module a source of at least one packet of a first MPEG-2 transport stream within a multiplexed signal
4 including the at least one packet of the first MPEG-2 transport stream, the method comprising the
5 steps of:

6 assigning a unique designator to the source of the first MPEG-2 transport stream;
7 creating a transport stream source indicator signal that includes the unique designator
8 associated with the at least one packet of the first MPEG-2 transport stream;
9 multiplexing the at least one packet of the first MPEG-2 transport stream with packets from at
10 least a portion of a second MPEG-2 transport stream to create the multiplexed signal; and
11 transmitting to the external conditional access module the transport stream source indicator
12 signal in conjunction with the multiplexed signal, wherein transmission of the transport stream source
13 indicator signal, by the unique designator, indicates the source of the at least one packet as the source
14 of the first MPEG-2 transport stream.

1 12. The method of claim 11, further including the step of decrypting, in the external conditional
2 access module, the at least one packet based on the source of the first MPEG-2 transport stream.

1 13. The method of claim 12, further including the step of transmitting the decrypted at least one
2 packet from the external conditional access module to the host terminal.

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1 14. A external conditional access module that can decrypt, based on a unique designator that
2 indicates a source of a data packet, data packets from at least one packetized data stream within an
3 incoming multiplexed signal comprised of data packets from more than one packetized data stream,
4 the external conditional access module comprising:

5 a host terminal interface for receiving the incoming multiplexed signal from a host terminal,
6 for transmitting an outgoing multiplexed signal to the host terminal, and for communicating the
7 unique designator for each data packet in both the incoming multiplexed signal and the outgoing
8 multiplexed signal;

9 a de-multiplexer for de-multiplexing the incoming multiplexed signal into data packets
10 associated with the at least one packetized data stream based on the unique designator associated with
11 each data packet;

12 a controller for determining if decryption is allowed for the data packets associated with the
13 least one packetized data stream and for controlling decryption parameters;

14 at least one decryptor for decrypting, if decryption is allowed, the data packets associated with
15 the at least one packetized data stream using decryption parameters for the at least one packetized data
16 stream; and

17 a multiplexer for multiplexing the data packets, including those that were decrypted and those
18 for which decryption was not allowed, into the outgoing multiplexed signal.

1 15. The method of claim 14, wherein the data packets and the packetized data stream are in a
2 format compliant with one of Moving Picture Experts Group type 2 (MPEG-2) standard, Moving
3 Picture Experts Group type 4 (MPEG-4) standard, Asynchronous Transfer Modulation (ATM)
4 standard, and Internet Protocol (IP) standard.

1 16. The method of claim 14, further comprising an encryptor for encrypting the data packets
2 associated with the at least one packetized data stream.

1 17. The method of claim 16, wherein the encryption provides copy protection for the data packets
2 associated with the at least one packetized data stream.

1 18. A host terminal that provides a multiplexed signal to an external conditional access module,
2 wherein the multiplexed signal includes data packets from at least two packetized data streams, the
3 host terminal comprising:

4 at least two tuners, each tuner for receiving one of the at least two packetized data streams;
5 and

6 a multiplexer for combining data packets from the at least two packetized data streams into
7 the multiplexed signal, for assigning a unique indicator that indicates which tuner received the
8 packetized data stream associated with the data packets, for transmitting the multiplexed signal to the
9 external conditional access module, and for communicating the unique designator associated with
10 each data packet to the external conditional access module.

1 19. The host terminal of claim 18, wherein the data packets and the packetized data stream are in
2 a format compliant with one of Moving Picture Experts Group type 2 (MPEG-2) standard, Moving
3 Picture Experts Group type 4 (MPEG-4) standard, Asynchronous Transfer Modulation (ATM)
4 standard, and Internet Protocol (IP) standard.

1 20. The host terminal of claim 18, further comprising a demultiplexer for receiving an output
2 signal from the external conditional access module, for de-multiplexing the output signal, and for
3 providing the at least two packetized data streams as separate packetized data streams.

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- 1 21. In a system with a plurality of packetized data streams, a method of designating a source of a
2 first packetized data stream within a multiplexed signal including at least a portion of the at least one
3 packetized data stream, the method comprising the steps of:
4 assigning a unique designator to the source of the at least one packetized data stream;
5 multiplexing at least the portion of the at least one packetized data stream with at least a
6 portion of a second packetized data stream to create the multiplexed signal; and
7 transmitting the unique designator in conjunction with the multiplexed signal, wherein
8 transmission of the unique designator indicates the source of the portion of the multiplexed signal as
9 the source of the at least one packetized data stream.